



## Louviers Water and Sanitation District

May 7, 2021

### Radium Update and Solutions

Dear Louviers Residents,

As you are aware, elevated levels of radium continue to be detected in the Louviers Water and Sanitation District's (LWDS) drinking water. Radium is a naturally occurring element common in Colorado and many of the groundwater supplies along the Front Range detect some levels of radium in the water. The District continues to evaluate options to address the radium levels.

Please find below a table with current radium levels from the past few years.

Entry Point Combined Radium-226 and Radium-228 Results				
Compliance Quarter	Sample Date	Result (pCi/L)	LRAA (pCi/L)	MCL Violation
1st Quarter 2018	2/21/2018	4.3	4.4*	No
2nd Quarter 2018	5/23/2018	6.2	5.1*	No
3rd Quarter 2018	8/29/2018	6.3	5.4*	No
4th Quarter 2018	11/12/2018	6.6	5.9	Yes
1st Quarter 2019	2/19/2019	9.3	7.1	Yes
2nd Quarter 2019	6/30/2019	6.5	7.2	Yes
3rd Quarter 2019	8/19/2019	8.2	7.7	Yes
4th Quarter 2019	11/11/2019	6.6	7.7	Yes
1st Quarter 2020	2/12/2020	6.1	6.9	Yes
2nd Quarter 2020	4/20/2020	7.0	7.0	Yes
3rd Quarter 2020	9/23/2020	5.8	6.4	Yes
4th Quarter 2020	11/13/2020	3.2	5.5	Yes
1st Quarter 2021	1/25/2021	6.4	5.6	Yes

**Note:**

Locational Running Annual Average (LRAA)

\*LRAA calculated using previous sample data not shown in the table

\*\*The Maximum Contaminant Level (MCL) for Combined Radium-226 and Radium-228 is 5.0 pCi/L.

In April 2019, the Board of Directors provided a letter regarding the options that were being pursued to remedy the radium issue, as well as to improve the water and wastewater facilities within the Louviers Water and Sanitation District.

Many of these options are still being considered, as well as the addition or clarification of other options, which are described below. The Board is working to address both Water and Wastewater infrastructure project costs through grant funding applications, budget allocation proposals, and potential loans, all which have been submitted to County, State and Federal government agencies including: The LWSD Board has been actively involved in discussions with multiple state and federal funding agencies, including: U.S Department of Agriculture, Rural Development; Colorado Water Resources and Power Development Authority; Colorado Water Conservation Board; future Range Metropolitan District, and Douglas County.

- Drilling a new well
  - Estimated Cost \$623,000
  - Pros: Least Expensive; likely to remove majority of radium
  - Cons: Annual Maintenance Cost; Does not resolve long-term water supply; engineering not reimbursed by Douglas County.
  
- Ion Exchange
  - Estimated Cost \$933,000
  - Waste Disposal \$25,000/year
  - Pros: Least Expensive; removes majority of radium
  - Cons: Annual Maintenance Cost; Does not resolve long-term water supply; engineering not reimbursed by Douglas County.
  
- Greensand Filtration with Pressure Filters
  - Estimated Cost \$1,483,000
  - Waste Disposal \$42,000/year
  - Pros: Removes approximately 50% of Radium
  - Cons: Only removes 50% of Radium; Annual Maintenance Cost; Periodic large scale maintenance requirements; Does not resolve long-term water supply; engineering not reimbursed by Douglas County.
  
- Alternate Water Source Connection (Dominion Water/Range Metropolitan District)
  - Estimated Cost \$3,695,000 to more than \$4,000,000
  - Pros:
    1. Provides virtually radium free water
    2. Renewable high quality water supply in perpetuity
    3. Increased water pressure and fire flows
    4. Other communities that went from wells to renewable water saw substantial increase in home values
    5. Eliminates concerns over the long-term availability of groundwater in the Denver Basin
  - Cons: COST, but

1. Would increase water pressure throughout the town and provide better fire flows
2. Provides access to more funding sources from the State
3. Some costs could be shared with Douglas County to meet their water needs along Moore Road.
4. Engineering costs May be reimbursed by Douglas County
5. Allows possible sale or lease of water from Well to recoup some costs
6. Cost could be amortized between 30 and 50-years to reduce impacts to residents' water bill.

The following table provides an overall timeline for addressing the radium levels developed by the Louviers Water and Sanitation District, alongside the CDPHE.

Table 19 - Implementation Schedule

Activity	Expected Timeframe	Expected Completion Date
Coordination between LWSD and adjacent agencies to determine requirements for connection to a renewable water supply	8-16 months	December 31, 2021
Design of groundwater treatment system, renewable water connection, or new well	6 months	June 30, 2022
CDPHE review and approval of design	4 months	October 21, 2022
Bid and contract award	2 months	December 31, 2022
Construction and implementation	10 months	October 31, 2023

LWSD continues to work with Douglas County to complete initial engineering, evaluate the alternatives described above and develop cost estimates for various alternatives.

Thank you for staying up-to-date with the ongoing work on this project.

Sincerely,

[Matthew Collitt](#)

President of the Board of Directors  
 Louviers Water and Sanitation District  
<https://louvierswsd.colorado.gov/>  
 info@ccrider.us